

**Supplemental Table 1 - Oligonucleotides used in this study**

Oligo name	Oligo sequence (5'-3')	Notes
MDS-286	NNNNNN	Random hexamer - library prep
Nextera1-bc	AATGATACGGCGACCAACCGAGATCTACAC<barcode>TCGTGGCAGCGTCAGATGTATAAGAGACAG	Library prep - barcoded adapter 1
Nextera2-bc	CAAGCAAGAACCGGCATACCGAGAT<barcode>GTCTCGTGGGCTCGGAGATGTATAAGAGACAG	Library prep - barcoded adapter 2
MDS-143	CAAGCAAGAACCGGCATACG	Library prep - 5' of adapter 2
MDS-445	AATGATACGGCGACCCACCGA	Library prep - 5' of adapter 1
MDS-479	ATTCACCATCGGAGATCG	qPCR - ORF1B F
MDS-480	TCTGGCTGCTCTGTACAC	qPCR - ORF1B R
MDS-481	GCTGGAGAACACCCAGAG	qPCR - ORF1A F
MDS-482	TTGCTGGATGATACTTTG	qPCR - ORF1A R
MDS-483	CGCACCACTCAACACATTG	qPCR - ORF2 F
MDS-484	TACTCCATGGGTGATCTGG	qPCR - ORF2 R
MDS-368	ATGCCGCTTAGAGAACCG	qPCR - GAPDH F
MDS-369	CAGCTCCCTACAACTTTC	qPCR - GAPDH R
MDS-691	CAACTGCTTGACGGCCCTG	Genome sequencing L-1 / sgRNA analysis
MDS-692	CAGGCCAACAACTCGAA	Genome sequencing L-2 / sgRNA analysis
MDS-693	AACTGTGAAACCCAACTG	Genome sequencing L-3
MDS-694	CACCGAAAGAACCAACCG	Genome sequencing L-4
MDS-695	GGTACCATCAAGCCAGC	Genome sequencing L-5
MDS-696	AGCTTACACTTGGCCCA	Genome sequencing L-6
MDS-697	CCAAACGGCAGCATGATC	Genome sequencing L-7
MDS-698	AGCCTCAACTTACCACTCCA	Genome sequencing L-8
MDS-699	TCGTGTAGATTGGGAATTGC	Genome sequencing L-9
MDS-700	GCAGACACGAAAGCACT	Genome sequencing L-10
MDS-701	GCACCTTAAGCAACCTG	Genome sequencing L-11
MDS-702	GACAACTCACACACACGA	Genome sequencing L-12
MDS-703	ACGTGGCTTCCCTGGTGT	Genome sequencing R-1 / sgRNA analysis
MDS-704	GCGGTGTTGCTGGATAGT	Genome sequencing R-2
MDS-705	TGCTGTCTGAGTCGAGG	Genome sequencing R-3
MDS-706	ACCGCTTITGATACTGTTGC	Genome sequencing R-4
MDS-707	CTGTGTGTTGACTGCTGATCTG	Genome sequencing R-5
MDS-708	GAGCTCACGTGGATG	Genome sequencing R-6
MDS-709	CGCCGGCTTGACTGAGT	Genome sequencing R-7
MDS-710	ACTCTCCGTCATGAAACCA	Genome sequencing R-8
MDS-711	AGCTCTCCAACTGGCTGG	Genome sequencing R-9
MDS-712	GGCGAGTGTGTCGATC	Genome sequencing R-10
MDS-713	CGCTGAGGAGTTGGT	Genome sequencing R-11
MDS-714	CGCGAAAGACTGTCC	Genome sequencing R-12
MDS-715	GGCTCQACAGCTACCAA	Genome sequencing L-13
MDS-716	GCTCCCGACAAACACAT	Genome sequencing L-14
MDS-717	GGACGTGCTGTTTACCG	Genome sequencing L-15
MDS-718	CGAGGCCAACCTGTTGAA	Genome sequencing L-16
MDS-719	ACACTTGTCTATGCTCGGT	Genome sequencing L-17
MDS-720	GCACCTCACAGCCACGAC	Genome sequencing L-18
MDS-721	CTCACACCTGACACCAG	Genome sequencing L-19
MDS-722	AGCACCTCCAAAGCAGT	Genome sequencing L-20
MDS-723	TCGGAGACTGGGATACC	Genome sequencing L-21
MDS-724	CATGTCAGGGCAATTCG	Genome sequencing L-22
MDS-725	AGCCACCCAACTCATTT	Genome sequencing L-23
MDS-726	TGACTGGGTGGTGTCAA	Genome sequencing L-24
MDS-727	GCTTCCGATGACTCTGGCG	Genome sequencing R-13
MDS-728	ATCACCATGGCGTTGT	Genome sequencing R-14
MDS-729	GAAGTGGCCGTGAGGTGT	Genome sequencing R-15
MDS-730	GAAGTCCGATGCGCATGG	Genome sequencing R-16
MDS-731	TGGTCTGAGGATGCGTC	Genome sequencing R-17
MDS-732	TGCCCATGTCACCGAACT	Genome sequencing R-18
MDS-733	CCCCGTGTCTGAGGTGA	Genome sequencing R-19
MDS-734	CGCCACAAACGGTATGCC	Genome sequencing R-20
MDS-735	CGAGTTGGCGAGGTG	Genome sequencing R-21
MDS-736	CGATGCGCTGTTGAGT	Genome sequencing R-22
MDS-737	CCTCCGATCTGAGTACGA	Genome sequencing R-23
MDS-738	GCCCCCTGGAGAAATTAGGC	Genome sequencing R-24
MDS-739	GAACAGCCAGCAGTGTGA	Genome sequencing L-25
MDS-740	CCACAGCGATGCCACATG	Genome sequencing L-26
MDS-741	GCCGCTAAAGACTTGGC	Genome sequencing L-27
MDS-742	TCTGGCAGCAAATCTCATCG	Genome sequencing L-28
MDS-743	TCTTTCTCACCGACGCCA	Genome sequencing L-29
MDS-744	ACCATCCGTTTATGTTGGA	Genome sequencing L-30
MDS-745	TCAACTGGCTGACCGAGC	Genome sequencing L-31
MDS-746	GTTTACACGAAACTTCTGCT	Genome sequencing L-32
MDS-747	TCACACACTTACCCCTCGA	Genome sequencing R-25
MDS-748	GCTGTTGGAGTGTCTTGG	Genome sequencing R-26
MDS-749	TGAGCTTGTGATGCTGTGT	Genome sequencing R-27
MDS-750	ACAGGGAAACACGCCACA	Genome sequencing R-28
MDS-751	ACTGAGGGATGGTTAACATGG	Genome sequencing R-29
MDS-752	CGTAGCCCCAGTCATGAC	Genome sequencing R-30
MDS-753	GCGGTAGGATTTTCAACCGA	Genome sequencing R-31
MDS-754	AAACTGTTTATGCCCTCG	Genome sequencing R-32
MDS-121	CCACTGACGAGATGACCGAGACTCGAGCTCAAGCTTTTTTTTTTTTTTT	5'/3' RACE Qt - oligo-dT primer
MDS-122	CCAGTGACGAGATGAGC	5'/3' RACE Qo - outer adapter primer
MDS-123	GAGGACTCTGAGCTCAAGC	5'/3' RACE Qi - inner adapter primer
MDS-755	ATCGGGGTGGAGACTCTTTG	5' RACE / sgRNA analysis
MDS-756	GAGAGGGAGTGTACCGAAGGG	5' RACE - nested 1
MDS-757	GGTACACTGTAAACACCAA	5' RACE - nested 2
MDS-676	AAACGAAACTGAGTGTGCC	3' RACE
MDS-677	TGAGACCTCTCCCGTGT	3' RACE - nested 1
MDS-678	TGCCATGACATTCCTCGTGT	3' RACE - nested 2
MDS-681	GTTACATCGGGGTGTGCAA	sgRNA analysis - ORF7
MDS-683	GGACAGTGAATTGACCGCTA	sgRNA analysis - ORF5/6
MDS-685	GCGGAAGATGAAACAGTGGG	sgRNA analysis - ORF4
MDS-687	AGCTTGTGATGCCGTGATG	sgRNA analysis - ORF3
MDS-689	TGGATGACGCTAGCTTGTG	sgRNA analysis - ORF2

adapter 1 barcode sequences: TGGTCTC, TCCAGTC, TAGCGTA, GCGATCA, AGCTACA, ACTCATC, TTGCGAG, AAGCGAC

adapter 2 barcode sequences (reverse complemented): TCGTTGG, GTGTCCT, TCCGTAT, TACGCTT, TACAACG, GAAGGAG, AACGCATC, TGAGATC